

Article 27. Air Emission Standards for Process Vents**§66264.1030. Applicability.**

(a) The regulations in this article apply to owners and operators of facilities that treat, store, or dispose of RCRA hazardous wastes (except as provided in Section 66264.1).

(b) Except for section 66264.1034, subsections (d) and (e), this article applies to process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage RCRA hazardous wastes with organic concentrations of at least 10 ppmw, if these operations are conducted in one of the following:

(1) a unit that is subject to the permitting requirements of chapter 20, or
 (2) a unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of section 66262.34(a) (i.e., a hazardous waste recycling unit that is not a 90-day tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of chapter 20, or

(3) A unit that is exempt from permitting under the provisions of section 66262.34(a) (i.e., a "90-day" tank or container) and is not a recycling unit under the provisions of section 66261.6.

(c) If the owner and operator of a facility subject to this article received a final permit under RCRA section 3005 prior to December 6, 1996, the requirements of this article shall be incorporated into the permit when the permit is reissued in accordance with the requirements of 40 CFR 124.15 or reviewed in accordance with the requirements of section 66270.50(d). Until such date when the owner and operator receives a final permit incorporating the requirements of this article, the owner and operator is subject to the requirements of article 27.

(d) The requirements of this article do not apply to the process vents at a facility where the facility owner or operator certifies that all of the process vents that would otherwise be subject to this article are equipped with and operating air emission controls in accordance with the process vent requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63. The documentation of compliance under regulations at 40 CFR part 60, part 61, or part 63 shall be kept with, or made readily available with, the facility operating record.

NOTE: Authority cited: Sections 25150, 25159, 25159.5, 25245 and 58012, Health and Safety Code. Reference: Sections 25150, 25159 and 25159.5, Health and Safety Code; and 40 CFR section 264.1030.

HISTORY

1. New article 27 (sections 66264.1030-66264.1036) filed 12-23-92; operative 1-22-93 (Register 93, No. 2).
2. Change without regulatory effect repealing former subsections (b)-(c) and adding new subsections (b)-(d) and amending NOTE filed 6-11-99 pursuant to Health and Safety Code section 25159.1 (Register 99, No. 24).
3. Change without regulatory effect repealing first subsections (b)—(b)(2) filed 7—1—2004 pursuant to section 100, title 1, California Code of Regulations (Register 2004, No. 27).

§66264.1032. Standards: Process Vents.

(a) The owner or operator of a facility with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous wastes organic concentrations of at least 10 ppmw shall either:

(1) reduce total organic emissions from all affected process vents at the facility below 1.4 kg/h (3 lb/h) and 2.8 Mg/yr (3.1 tons/yr); or

(2) reduce, by use of a control device, total organic emissions from all affected process vents at the facility by 95 weight percent.

(b) If the owner or operator installs a closed-vent system and control device to comply with the provisions of subsection (a) of this section the closed-vent system and control device shall meet the requirements of Section 66264.1033.

(c) Determinations of vent emissions and emission reduction or total organic compound concentrations achieved by add-on control devices shall be based on engineering calculations or performance tests. If performance tests are used to determine vent emissions, emission reductions, or total organic compound concentrations achieved by add-on control devices, the performance tests shall conform with the requirements of Section 66264.1034(c).

(d) When an owner or operator and the Department do not agree on determinations of vent emissions and/or emission reductions or total organic compound concentrations achieved by add-on control devices based on engineering calculations, the procedures in Section 66264.1034(c) shall be used to resolve the disagreement.

NOTE: Authority cited: Sections 25150 and 25159, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code; 40 CFR section 264.1032.

HISTORY

1. New section filed 12-23-92; operative 1-22-93 (Register 93, No. 2).

§ 66264.1033. Standards: Closed-Vent Systems and Control Devices.

(a)(1) Owners or operators of closed-vent systems and control devices used to comply with provisions of this chapter shall comply with the provisions of this section.

(2)(A) The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of this article on the effective date that the facility becomes subject to the provisions of this article must prepare an implementation schedule that includes dates by which the closed-vent

system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to this article for installation and startup.

(B) Any unit that begins operation after December 21, 1990, and is subject to the provisions of this article when operation begins, shall comply with the rules immediately (i.e., shall have control devices installed and operating on startup of the affected unit); the 30-month implementation schedule does not apply.

(C) The owner or operator of any facility in existence on the effective date of a statutory or Department regulatory amendment that renders the facility subject to this article shall comply with all requirements of this article as soon as practicable but no later than 30 months after the amendment's effective date. When control equipment required by this article cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: Specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of on-site installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of this article. The owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

(D) Owners and operators of facilities and units that become newly subject to the requirements of this article after December 8, 1997, due to an action other than those described in article (a)(2)(C) of this section must comply with all applicable requirements immediately (i.e., must have control devices installed and operating on the date the facility or unit becomes subject to this article; the 30-month implementation schedule does not apply).

(b) A control device involving vapor recovery (e.g., a condenser or absorber) shall be designed and operated to recover the organic vapors vented to it with an efficiency of 95 weight percent or greater unless the total organic emission limits of Section 66264.1032(a)(1) for all affected process vents can be attained at an efficiency less than 95 weight percent.

(c) An enclosed combustion device (e.g., a vapor incinerator, boiler, or process heater) shall be designed and operated to reduce the organic emissions vented by it by 95 weight percent or greater; to achieve a total organic compound concentration of 20 ppmv, expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to 3 percent oxygen; or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 degrees C. If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(d)(1) A flare shall be designed for and operated with no visible emissions as determined by the methods specified in subsection (e)(1) of this section, except for periods not to exceed a total of five minutes during any two consecutive hours.

(2) A flare shall be operated with a flame present at all times, as determined by the methods specified in subsection (f)(2)(C) of this section.

(3) A flare shall be used only if the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or if the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted shall be determined by the methods specified in subsection (e)(2) of this section.

(4)(A) A steam-assisted or non-assisted flare shall be designed for and operated with an exit velocity, as determined by the methods specified in subsection (e)(3) of this section, less than 18.3 m/s (60 ft/s), except as provided in subsections (B) and (C) of this section.

(B) A steam-assisted or non-assisted flare designed for and operated with an exit velocity, as determined by the method specified in subsection (e)(3) of this section, equal to or greater than 18.3 m/s (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(C) A steam-assisted or non-assisted flare designed for and operated with an exit velocity, as determined by the methods specified in subsection (e)(3) of this section, less than the velocity, V_{\max} as determined by the method specified in subsection (e)(4) of this section and less than 122 m/s (400 ft/s) is allowed.

(5) An air-assisted flare shall be designed and operated with an exit velocity less than the velocity, V_{\max} , as determined by the method specific in subsection (e)(5) of this section.

(6) A flare used to comply with this section shall be steam-assisted, air-assisted, or non-assisted.

(e)(1) Reference Method 22 in 40 CFR, Part 60, incorporated by reference in Section 66260.11 of this chapter, shall be used to determine the compliance of a flare with the visible emission provisions of this article. The observation period is two hours and shall be used according to Method 22.

(2) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_t = K \left[\sum_{i=1}^n C_i H_i \right]$$

where:

H_t = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25 degrees C and 760 mm Hg, but the standard temperature for determining the volume corresponding to 1 mol is 20 degrees C;

- K = Constant, 1.74×10^{-7} (1/ppm) (g mol/scm) (MJ/kcal) where standard temperature for (g mol/scm) is 20 degrees C;
- C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 in 40 CFR, Part 60 and measured for hydrogen and carbon monoxide by ASTM D 1946-82 (incorporated by reference as specified in Section 66260.11); and
- H_i = Net heat combustion of sample component i, kcal/g mol at 25 degrees C and 760 mm Hg. The heats of combustion may be determined using ASTM D 2382-83 (incorporated by reference as specified in Section 66260.11) if published values are not available or cannot be calculated.

(3) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D in 40 CFR, Part 60 as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(4) The maximum allowed velocity in m/s, V_{max}, for a flare complying with subsection (d)(4)(C) of this section shall be determined by the following equation:

$$\text{Log}_{10} (V_{\text{max}}) = (H_T + 28.8)/31.7$$

where:

28.8 = Constant,

31.7 = Constant,

H_T = The net heating value as determined in subsection (e)(2) of this section.

(5) The maximum allowed velocity in m/s, V MAX, for an air-assisted flare shall be determined by the following equation:

$$V_{\text{max}} = 8.706 + 0.7084 (H_T)$$

where:

8.706 = Constant,

0.7084 = Constant,

H_T = The net heating value as determined in subsection (e)(2) of this section.

(f) The owner or operator shall monitor and inspect each control device required to comply with this section to ensure proper operation and maintenance of the control device by implementing the following requirements:

(1) install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor shall be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined; and

(2) install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:

(A) for a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of +/- 1 percent of the temperature being monitored in degrees C or +/- 0.5 degrees C, whichever is greater. The temperature sensor shall be installed at a location in the combustion chamber downstream of the combustion zone;

(B) for a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations and have an accuracy of +/- 1 percent of the temperature being monitored in degrees C or +/- 0.5 degrees C, whichever is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet;

(C) for a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame;

(D) for a boiler or process heater having a design heat input capacity less than 44 MW, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of +/- 1 percent of the temperature being monitored in degrees C or +/- 0.5 degrees C, whichever is greater. The temperature sensor shall be installed at a location in the furnace downstream of the combustion zone;

(E) for a boiler or process heater having a design heat input capacity greater than or equal to 44 MW, a monitoring device equipped with a continuous recorder to measure a parameter(s) that indicates good combustion operating practices are being used; and

(F) for a condenser, either:

1. a monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent system from the condenser; or

2. a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in degrees Celsius (°C) or ±0.5°C, whichever is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser exit (i.e., product side);

(G) for a carbon adsorption system that regenerates the carbon bed directly in the control device such as a

fixed-bed carbon adsorber, either:

1. a monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent system from the carbon bed; or
2. a monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle; and

(3) inspect the readings from each monitoring device required by subsection (f)(1) and (2) of this section at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of this section.

(g) An owner or operator using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device shall replace the existing carbon in the control device with fresh carbon at a regular, pre-determined time interval that is no longer than the carbon service life established as a requirement of Section 66264.1035(b)(4)(C)6.

(h) An owner or operator using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly on-site in the control device shall replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:

(1) monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency shall be daily or at an interval no greater than 20 percent of the time required to consume the total carbon working capacity established as a requirement of Section 66264.1035(b)(4)(C)7, whichever is longer; or

(2) replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of Section 66264.1035(b)(4)(C)7.

(i) An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.

(j) An owner or operator of an affected facility seeking to comply with the provisions of this chapter by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.

(k) A closed-vent system shall meet either of the following design requirements:

(1) a closed-vent system shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background as determined by the procedure in section 66264.1034(b) and by visual inspections; or

(2) a closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

(l) The owner or operator shall monitor and inspect each closed-vent system required to comply with this section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:

(1) each closed-vent system that is used to comply with subsection (k)(1) of this section shall be inspected and monitored in accordance with the following requirements:

(A) an initial leak detection monitoring of the closed-vent system shall be conducted by the owner or operator on or before the date that the system becomes subject to this section. The owner or operator shall monitor the closed-vent system components and connections using the procedures specified in section 66264.1034(b) of this article to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background.

(B) after the initial leak detection monitoring required in subsection (l)(1)(A) of this section, the owner or operator shall inspect and monitor the closed-vent system as follows:

1. closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator shall monitor a component or connection using the procedures specified in section 66264.1034(b) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).

2. closed-vent system components or connections other than those specified in subsection (l)(1)(B)1. of this section shall be monitored annually and at other times as requested by the Department, except as provided for in subsection (o) of this section, using the procedures specified in section 66264.1034(b) to demonstrate that the components or connections operate with no detectable emissions.

(C) in the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of subsection (l)(3) of this section.

(D) the owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 66264.1035.

(2) each closed-vent system that is used to comply with subsection (k)(2) of this section shall be inspected and monitored in accordance with the following requirements:

(A) the closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping or loose connections.

(B) the owner or operator shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year.

(C) in the event that a defect or leak is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection (l)(3) of this section.

(D) the owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 66264.1035.

(3) the owner or operator shall repair all detected defects as follows:

(A) detectable emissions, as indicated by visual inspection, or by an instrument reading greater than 500 ppmv above background, shall be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected, except as provided for in subsection (l)(3)(C) of this section.

(B) a first attempt at repair shall be made no later than 5 calendar days after the emission is detected.

(C) delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

(D) the owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in section 66264.1035.

(m) Closed-vent systems and control devices used to comply with provisions of this article shall be operated at all times when emissions may be vented to them.

(n) The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:

(1) regenerated or reactivated in a thermal treatment unit that meets one of the following:

(A) the owner or operator of the unit has been issued a final permit under chapter 20 which implements the requirements of article 16; or

(B) the unit is equipped with and operating air emission controls in accordance with the applicable requirements of articles 27 and 28.5 of either this chapter or chapter 15; or

(C) the unit is equipped with and operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR part 61 or 40 CFR part 63.

(2) incinerated in a hazardous waste incinerator for which the owner or operator either:

(A) has been issued a final permit under chapter 20 which implements the requirements of chapter 14, article 15; or

(B) has designed and operates the incinerator in accordance with the interim status requirements of chapter 15, article 15.

(3) burned in a boiler or industrial furnace for which the owner or operator either:

(A) has been issued a final permit under chapter 20 which implements the requirements of chapter 16, article 8; or

(B) has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of chapter 16, article 8.

(o) Any components of a closed-vent system that are designated, as described in section 66264.1035(c)(9), as unsafe to monitor are exempt from the requirements of subsection (l)(1)(B)2. of this section if:

(1) the owner or operator of the closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subsection (l)(1)(B)2. of this section; and

(2) the owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in subsection (l)(1)(B)2. of this section as frequently as practicable during safe-to-monitor times.

NOTE: Authority cited: Sections 25150, 25159, 25159.5, 25245 and 58012, Health and Safety Code. Reference: Sections 25150, 25159 and 25159.5, Health and Safety Code; and 40 CFR section 264.1033.

HISTORY

1. New section filed 12-23-92; operative 1-22-93 (Register 93, No. 2).

2. Change without regulatory effect amending subsections (c), (e)(2) and (k)(4) filed 12-28-95 pursuant to section 100, title 1, California Code of Regulations (Register 95, No. 52).

3. Change without regulatory effect amending section and NOTE filed 6-11-99 pursuant to Health and Safety Code section 25159.1 (Register 99, No. 24).

66264.1034. Test Methods and Procedures.

(a) Each owner or operator subject to the provisions of this article shall comply with the test methods, procedures and requirements provided in this section.

(b) When a closed-vent system is tested for compliance with no detectable emissions, as required in Section 66264.1033(f), the test shall comply with the following requirements:

- (1) monitoring shall comply with Reference Method 21 in 40 CFR, part 60;
- (2) the detection instrument shall meet the performance criteria of Reference Method 21 in 40 CFR, part 60;
- (3) the instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21 in 40 CFR, part 60; and
- (4) calibration gases shall be:
 - (A) zero air (less than 10 ppm of hydrocarbon in air); and
 - (B) a mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane; and
- (5) the background level shall be determined as set forth in Reference Method 21 in 40 CFR, part 60;
- (6) the instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21 in 40 CFR, part 60; and
- (7) the arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(c) Performance tests to determine compliance with Section 66264.1032(a) and with the total organic compound concentration limit of Section 66264.1033(c) shall comply with the following:

(1) performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices shall be conducted and data reduced in accordance with the following reference methods and calculation procedures:

- (A) method 2 in 40 CFR, Part 60 for velocity and volumetric flow rate;
- (B) method 18 in 40 CFR, Part 60 for organic content;
- (C) each performance test shall consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs shall apply. The average shall be computed on a time-weighted basis;

(D) total organic mass flow rates shall be determined by the following equation:

$$E_h = Q_{sd} \left\{ \sum_{i=1}^n C_i MW_i \right\} [0.0416] [10^{-6}]$$

where:

- E_h = Total organic mass flow rate, kg/h;
- Q_{sd} = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dry standard m^3/h ;
- n = Number of organic compounds in the vent gas;
- C_i = Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18;
- MW_i = Molecular weight of organic compound i in the vent gas, kg/kg-mol;
- 0.0416 = Conversion factor for molar volume, $kg\text{-mol}/m^3$ (at 293 K and 760 mm Hg);
- 10^{-6} = Conversion from ppm, ppm^{-1} .

(E) the annual total organic emission rate shall be determined by the following equation:

$$E_A = (E_h) (H)$$

where:

- E_A = Total organic mass emission rate, kg/y;
- E_h = Total organic mass flow rate for the process vent, kg/h;
- H = Total annual hours of operations for the affected unit, h.

(F) total organic emissions from all affected process vents at the facility shall be determined by summing the hourly total organic mass emission rates (E_h as determined in subsection (c)(1)(D) of this section) and by summing the annual total organic mass emission rates (E_A , as determined in subsection (c)(1)(E) of this section) for all affected process vents at the facility.

(2) The owner or operator shall record such process information as may be necessary to determine the conditions of the performance tests. Operators during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(3) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

- (A) sampling ports adequate for the test methods specified in subsection (c)(1) of this section;
- (B) safe sampling platform(s);
- (C) safe access to sampling platform(s); and
- (D) utilities for sampling and testing equipment.

(4) For the purpose of making compliance determinations, the time-weighted average of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner's or operator's control, compliance may, upon

the Department's written approval, be determined using the average of the results of the two other runs.

(d) To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of this article, the owner or operator shall make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less than 10 ppmw using one of the following two methods:

(1) direct measurement of the organic concentration of the waste using the following procedures:

(A) the owner or operator shall take a minimum of four grab samples of waste for each waste stream managed in the affected unit under process conditions expected to cause the maximum waste organic concentration;

(B) for waste generated on-site, the grab samples shall be collected at a point before the waste is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated off-site, the grab samples shall be collected at the inlet to the first waste management unit that receives the waste provided the waste has been transferred to the facility in a closed system such as a truck and the waste is not diluted or mixed with other waste;

(C) each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method 9060 or 8260 of SW-846 third edition and updates, as incorporated by reference under Section 66260.11;

(D) the arithmetic mean of the results of the analyses of the four samples shall apply for each waste stream managed in the unit in determining the time-weighted, annual average total organic concentration of the waste. The time-weighted average shall be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each waste stream managed in the unit;

(2) Using knowledge of the waste to determine that its total organic concentration is less than 10 ppmw. Documentation of the waste determination is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a waste stream having a total organic content less than 10 ppmw, or prior specification analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

(e) The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous wastes with time-weighted, annual average total organic concentrations less than 10 ppmw shall be made as follows:

(1) by the effective date that the facility becomes subject to the provisions of this article or by the date when the waste is first managed in a waste management unit, whichever is later; and

(A) for continuously generated waste, annually, or

(B) whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.

(f) When an owner or operator and the Department do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manage a hazardous waste with organic concentrations of at least 10 ppmw based on knowledge of the waste, the procedures in Method 8260 of SW-846 third edition and updates (as incorporated by reference in Section 66260.11 of this division), shall be used to resolve the dispute.

NOTE: Authority cited: Sections 25150, 25159 and 58012, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code; and 40 CFR Section 264.1034.

HISTORY

1. New section filed 12-23-92; operative 1-22-93 (Register 93, No. 2).
2. Change without regulatory effect amending subsection (c)(1)(E) filed 4-19-93 pursuant to title 1, section 100, California Code of Regulations (Register 93, No. 17).
3. Change without regulatory effect amending subsection (d)(2) filed 12-28-93 pursuant to title 1, section 100, California Code of Regulations (Register 93, No. 53).
4. Editorial correction of subsection (b) (Register 93, No. 53).
5. Editorial correction of subsections (d)(1)(B) and (d)(2) (Register 95, No. 50).
6. Change without regulatory effect amending subsections (c)(1)(D) filed 12-28-95 pursuant to section 100, title 1, California Code of Regulations (Register 95, No. 52).
7. Change without regulatory effect amending subsection (b)(4)(B) filed 3-28-96 pursuant to section 100, title 1, California Code of Regulations (Register 96, No. 13).
8. Amendment of subsections (d)(1)(C) and (f) and amendment of NOTE filed 1-13-98; operative 11-12-98 (Register 98, No. 42).
9. Change without regulatory effect amending subsection (b) filed 6-11-99 pursuant to Health and Safety Code section 25159.1 (Register 99, No. 24).

§ 66264.1035. Recordkeeping Requirements.

(a)(1) Each owner or operator subject to the provisions of this article shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one hazardous waste management unit subject to the provisions of this article may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(b) Owners and operators shall record or include the following information in the facility operating record:

(1) for facilities that comply with the provisions of Section 66264.1033(a)(2), an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule shall also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule shall be in the facility operating record by the effective date that the facility becomes subject to the provisions of this article;

(2) up-to-date documentation of compliance with the process vent standards in Section 66264.1032, including:

(A) information and data identifying all affected process vents, annual throughout and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan); and

(B) information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions shall be made using operating parameter values (e.g., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or operator takes any action (e.g., managing a waste of different composition or increasing operating hours of affected waste management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

(3) Where an owner or operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan shall include:

(A) a description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This shall include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating range of key process and control device parameters during the test program;

(B) a detailed engineering description of the closed-vent system and control device including:

1. manufacturer's name and model number of control device;
2. type of control device;
3. dimensions of the control device;
4. capacity; and
5. construction materials; and

(C) a detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(4) Documentation of compliance with Section 66264.1033, documentation shall include the following information:

(A) a list of all information references and sources used in preparing the documentation; and

(B) records, including the dates, of each compliance test required by Section 66264.1033(k);

(C) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" (incorporated by reference as specified in Section 66260.11) or other engineering texts acceptable to the Department that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with subsection (b)(4)(C)1 through (b)(4)(C)7 of this section shall be required to be submitted to the Department to comply with this requirement. The design analysis shall address the vent system characteristics and control device operation parameters as specified below.

1. For a thermal vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

2. For a catalytic vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

3. For a boiler or process heater, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone.

4. For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in Section 66264.1033(d).

5. For a condenser, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design organic compound concentration level, design average temperature of the condenser exhaust vent system, and

design average temperatures of the coolant fluid at the condenser inlet and outlet.

6. For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly on-site in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, number, and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

7. For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly on-site in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(D) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(E) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 percent or greater unless the total organic concentration limit of Section 66264.1032(a) is achieved at an efficiency less than 95 weight percent or the total organic emission limits of Section 66264.1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent. A statement signed and dated by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

(F) If performance tests are used to demonstrate compliance, all test results.

(c) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of this chapter shall be recorded and kept up-to-date in the facility operating record. The information shall include:

(1) description and date of each modification that is made to the closed-vent system or control device design;

(2) identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with Section 66264.1033(f)(1) and (f)(2);

(3) monitoring, operating, and inspection information required by subsections (f) through (k) of Section 66264.1033;

(4) date, time, and duration of each period of control device operation, when any monitored parameter exceeds the value established in the control device design analysis as specified below:

(A) for a thermal vapor incinerator designed to operate with a minimum residence time of 0.50 second at a minimum temperature of 760 degrees C, period when the combustion temperature is below 760 degrees C;

(B) for a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of 95 weight percent or greater, period when the combustion zone temperature is more than 28 degrees C below the design average combustion zone temperature established as a requirement of subsection (b)(4)(C)1 of this section;

(C) for a catalytic vapor incinerator, period when:

1. temperature of the vent stream at the catalyst bed inlet is more than 28 degrees C below the average temperature of the inlet vent stream established as a requirement of subsection (b)(4)(C)2 of this section; or

2. temperature difference across the catalyst bed is less than 80 percent of the design average temperature difference established as a requirement of paragraph (b)(4)(C)2 of this section; and

(D) for a boiler or process heater, period when:

1. flame zone temperature is more than 28 degrees C below the design average flame zone temperature established as a requirement of subsection (b)(4)(C)3 of this section; or

2. position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of paragraph (b)(4)(C)3 of this section; and

(E) for a flare, period when the pilot flame is not ignited;

(F) for a condenser that complies with Section 66264.1033(f)(2)(F)1, period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than 20 percent greater than the design outlet organic compound concentration level established as a requirement of paragraph (b)(4)(C)5 of this section;

(G) for a condenser that complies with Section 66264.1033(f)(2)(F)2, period when:

1. temperature of the exhaust vent system stream from the condenser is more than 6 degrees C above the design average exhaust vent system stream temperature established as a requirement of subsection (b)(4)(C)5 of this section; or

2. temperature of the coolant fluid exiting the condenser is more than 6 degrees C above the design average coolant fluid temperature at the condenser outlet established as a requirement of subsection (b)(4)(C)5 of this section; and

(H) for a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device and complies with Section 66264.1033(f)(2)(G)1, period when the organic compound concentration level or readings of organic compounds in the exhaust vent system from the carbon bed are more than 20 percent greater than the design exhaust vent stream organic compound concentration level established

as a requirement of subsection (b)(4)(C)6 of this section;

(l) for a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device and complies with Section 66264.1033(f)(2)(G)(2), period when the vent stream continues to flow through the control device beyond the pre-determined carbon bed regeneration time established as a requirement of subsection (b)(4)(C)6 of this section;

(5) explanation for each period recorded under subsection (c)(4) of this section the cause for control device operating parameter exceeding the design value and the measure implemented to correct the control device operation;

(6) for a carbon adsorption system operated subject to requirements specified in Section 66264.1033(g) or Section 66264.1033(h)(2), date when existing carbon in the control device is replaced with fresh carbon;

(7) for a carbon adsorption system operated subject to requirements specified in Section 66264.1033(h)(1), a log that records:

(A) date and time when control device is monitored for carbon breakthrough and the monitoring device reading;

(B) date when existing carbon in the control device is replaced with fresh carbon; and

(8) date of each control device start-up and shutdown.

(9) an owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to Section 66264.1033(o) shall record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of Section 66264.1033(o), an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.

(10) when each leak is detected as specified in Section 66264.1033(l), the following information shall be recorded:

(A) the instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number.

(B) the date the leak was detected and the date of first attempt to repair the leak.

(C) the date of successful repair of the leak.

(D) maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonreparable.

(E) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

1. the owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

2. if delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(d) Records of the monitoring, operating, and inspection information required by subsections (c)(3) through (c)(10) of this section shall be maintained by the owner or operator for at least 3 years following the date of each occurrence, measurement, maintenance, corrective action, or record.

(e) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the Department will specify the appropriate recordkeeping requirements.

(f) Up-to-date information and data used to determine whether or not a process vent is subject to the requirements in Section 66264.1032, including supporting documentation as required by Section 66264.1034(d)(2), when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used, shall be recorded in a log that is kept in the facility operating record.

NOTE: Authority cited: Sections 25150, 25159, 25159.5, 25245 and 58012, Health and Safety Code. Reference: Sections 25150, 25159 and 25159.5, Health and Safety Code; and 40 CFR section 264.1035.25150,

HISTORY

1. New section filed 12-23-92; operative 1-22-93 (Register 93, No. 2).

2. Change without regulatory effect amending subsection (b)(4)(B) filed 12-28-93 pursuant to title 1, section 100, California Code of Regulations (Register 93, No. 53).

3. Change without regulatory effect adding subsections (c)-(9)-(c)(10)(E)2. and amending subsection (d) and NOTE filed 6-11-99 pursuant to Health and Safety Code section 25159.1 (Register 99, No. 24).

4. Change without regulatory effect repealing second subsection (d) filed 7-1-2004 pursuant to section 100, title 1, California Code of Regulations (Register 2004, No. 27).

§66264.1036. Reporting Requirements.

(a) A semiannual report shall be submitted to the Department by owners and operators subject to the requirements of this article. The report shall be submitted by first week of February and August of each year. The report shall include the following information:

(1) the identification number, name, and address of the facility; and

(2) for each month during the semiannual reporting period:

(A) dates when any control device exceeded or operated outside of the design specifications, as defined in Section 66264.1035(c)(4) and as indicated by the control device monitoring required by Section 66264.1033(f) for

more than 24 hours;

(B) dates when any flares operated with visible emissions as defined in Section 66264.1033(d) and as determined by Method 22 monitoring;

(C) the duration and cause of each exceedance or visible emissions; and

(D) any corrective measures taken.

(b) If, during the semiannual reporting period, the control device does not exceed or operate outside of the design specifications as defined in Section 66264.1035(c)(4) for more than 24 hours or a flare does not operate with visible emissions as defined in Section 66264.1033(d), a report to the Department is not required.

NOTE: Authority cited: Sections 25150 and 25159, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code; 40 CFR section 264.1036.

HISTORY

1. New section filed 12-23-92; operative 1-22-93 (Register 93, No. 2).